NPRM. Specifically, we clarify that the obligation to pass signaling information applies to the telephone number or billing number,[1239] and we clarify that the revised rules apply to telecommunications carriers and providers of interconnected VoIP services. Finally, because, as discussed below, our waiver process is available to parties seeking exceptions to the revised rule, we remove the proposed rule language limiting applicability in relation to industry standards.[1240] With these minor changes, we adopt the proposed prohibition on stripping or altering information regarding the calling party number.

4. Exceptions

721. The *USF/ICC Transformation NPRM* sought comment on whether phantom traffic rules should contain limited exceptions, including where it would not be technically feasible to comply with the obligation to transmit the calling party number with the network technology deployed or where industry standards would permit deviation from the duty to pass signaling information unaltered.[1241] Some parties suggested that the Commission should exercise caution before including any exceptions to its rules. For example, the Missouri Small Telephone Company Group stated that it "does not believe it is appropriate for an industry standard to trump a federal rule," and as such "the entire exception [should] be deleted."[1242] Similarly, parties recommended that the Commission eliminate or carefully enumerate the circumstances in which it would be acceptable to deviate from the requirement to pass signaling information unaltered. The Nebraska Rural Independent Companies expressed concern that the technical feasibility exception "leaves room for many providers to use the excuse of 'transmission was not technically feasible'" and therefore posited that there should be "few to no circumstances that the proposed rules will not be followed."[1243]

722. Meanwhile, other parties proposed that technical feasibility and industry standards exceptions be applied to both sections of the proposed signaling rules, §§ 64.1601(a) and (b).[1244] Commenters also suggested that the rules include an exception for all industry standards, whether published or not,[1245] and asked that the Commission clarify that the rules do not require the deployment of new equipment or otherwise add costs for compliance.[1246] Finally, parties asked the Commission to explicitly recognize certain exceptions to the proposed rules.[1247]

723. We agree with the concern expressed by some commenters that any exceptions would have the potential to undermine the rules.[1248] Moreover, we are concerned that disputes concerning the

[1239] *See, e.g., id.* at 50 n. 71 (urging the Commission to delete references to "all" SS7 notation from the final rules).

[1240] *See infra* para. 723.

[1241] *USF/ICC Transformation NPRM*, 26 FCC Rcd at 4793, App. B.

[1242] MoSTCG Section XV Comments at 10; *see also* NECA et al. Section XV Comments at 24.

[1243] Nebraska Rural Companies Section XV Comments at 25.

[1244] *See* Verizon Section XV Comments at 49; Level 3 Section XV Reply at 9-10; *see also* AT&T Section XV Comments at 24; Verizon Section XV Reply at 32.

[1245] *See* PAETEC et al. Section XV Comments at 4, 13; Earthlink Section XV Comments at 24.

[1246] *See* AT&T Section XV Comments at 24-25, Reply at 15; CTIA Section XV Comments at 9; Level 3 Section XV Reply at 9. However, some parties have indicated that the revised rules will not incrementally increase the costs to any carrier. *See* ITTA Section XV Comments at 21.

[1247] *See, e.g.*, AT&T Section XV Comments at 24-25.

[1248] *See* MoSTCG Section XV Comments at 10; Nebraska Rural Companies Section XV Comments at 25; Rural Associations Section XV Comments at 22-24.

applicability of exceptions could arise and lead to costly disagreements or litigation. Accordingly, we decline to adopt any general exceptions to our new call signaling rules at this time. Parties seeking limited exceptions or relief in connection with the call signaling rules we adopt can avail themselves of established waiver procedures at the Commission. To that end, we delegate authority to the Wireline Competition Bureau to act upon requests for a waiver of the rules adopted herein in accordance with existing Commission rules.[1249]

5. Signaling / Billing Record Requirements

a. Proposals

724. A number of parties commenting on the *USF/ICC Transformation NPRM*[1250] suggest that our signaling rules should address, in addition to CPN and CN information, other call signaling fields including Operating Company Number (OCN),[1251] Carrier Identification Code (CIC),[1252] Jurisdiction Information Parameter (JIP),[1253] and Local Routing Number (LRN).[1254] These parties propose additional

[1249] 47 C.F.R. § 1.3.

[1250] *See, e.g.*, Frontier Section XV Comments at 13; Rural Associations Section XV Comments at 22, 27, n. 64, Rural Associations Section XV Reply at 9-14; PAETEC et al. Section XV Comments at 4, 6-8, PAETEC et al. Section XV Reply at 3-5.

[1251] Operating Company Numbers (OCNs), also called company codes, are a four digit numerical code used to uniquely identify telecommunications service providers per industry standard ATIS-0300251, *Codes for Identification of Service Providers for Information Exchange.* NECA assigns all company codes. According to NECA, applications of OCNs include, but are not limited to NECA F.C.C. Tariff No. 4, Assignment of OCNs in the Local Exchange Routing Guide (LERG), Access Service Requests (ASRs), Multiple Exchange Carrier Access Billing (MECAB), Small Exchange Carrier Access Billing (SECAB), Exchange Message Interface (EMI), and Exchange Message Records (EMR). *See* https://www.neca.org/cms400min/NECA_Templates/Code_Administration.aspx (last visited May 31, 2011). The Operating Company Number (OCN) is used in billing records to identify a local telecommunications provider. Billing records for calls completed without an IXC identify the originating carrier by an OCN. *See* Verizon, Verizon's Proposed Regulatory Action to Address Phantom Traffic at 4 (Verizon Phantom Traffic White Paper), attached to Letter from Donna Epps, Vice President, Federal Regulatory Advocacy, Verizon, to Marlene H. Dortch, Secretary, FCC, CC Docket No. 01-92 (filed Dec. 20, 2005).

[1252] CICs (Carrier Identification Code) are a numeric code assigned by the North American Numbering Plan Administrator for the provisioning of selected switched services. The numeric code is unique to each entity and is used by the telephone company to route calls to the trunk group designated by the entity to which the code was assigned. *See* ATIS Telecom Glossary http://www.atis.org/glossary/definition.aspx?id=6095 (last visited June 6, 2011). CIC is also defined in the Commission's rules as a code used in tandem switching that can be used to identify an interexchange provider. *See* 47 C.F.R. § 69.2(vv).

[1253] The Jurisdiction Information Parameter (JIP) is defined as an optional parameter in the SS7 Initial Address Message. In the number portability context, the JIP parameter is used to retain, in call signaling, the first six dialed digits of a telephone number that has been ported. *See* TRAVIS RUSSELL, SIGNALING SYSTEM #7 366, 643 (Table 8.35) McGraw-Hill Communications (Fifth Edition 2006); *see also* Frontier Section XV Comments at 13 (JIP "is the NPA-NXX that identifies the originating caller's geographic location and the originating caller's service provider."). The record in this proceeding also indicates that parties are making alternate use of the optional JIP parameter pursuant to agreements. *See* XO Section XV Comments at 33 ("pursuant to agreements already in place, some carriers are currently exchanging VoIP traffic via local interconnection trunks and populating the Jurisdictional Indicator Parameter ("JIP") field on the call record to designate the traffic as VoIP traffic").

signaling requirements that they assert will allow terminating carriers to identify the service provider financially responsible for each call, to jurisdictionalize traffic, and to bill the appropriate parties.[1255] Other parties oppose these proposals.[1256]

b. Discussion

725. After considering the substantial record received in response to the *USF/ICC Transformation NPRM*, we determine that limiting the scope of the rules we adopt to address phantom traffic to CPN and CN signaling is consistent with our goal of helping to ensure complete and accurate passing of call signaling information, while minimizing disruption to industry practices or existing carrier agreements.[1257] Our revised and expanded requirements with regard to CPN and CN will ensure that terminating carriers will receive, via SS7, MF, or IP signaling, information helpful in identifying carriers sending terminating traffic to their networks. This information, in combination with billing records provided to terminating carriers in accordance with industry standards, should significantly reduce the amount of unbillable traffic that terminating carriers receive.

726. As detailed above, several commenters advocate requirements for CIC or OCN to be included in billing records. However, neither our existing nor our proposed rules specify any billing record requirements. Accordingly, we decline, at this time, to disturb the industry billing record processes that have developed independently of Commission regulation.

727. Other commenters want to require CIC or OCN information to be passed in call signaling.[1258] These commenters do not, however, address certain complexities related to such a requirement, such as whether and how the signaling should be required in the SS7 stream, whether equivalent signaling should be required for IP traffic, and if so, what formats and protocols should be required.[1259] These complexities are, in our view, best resolved by industry standard setting bodies so that they can be informed by, and adapt to, changing technology.[1260] Accordingly, unlike calling party

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[1254] The Local Routing Number (LRN) is a telephone number assigned in the local number portability database for the purposes of routing a call to a telephone number that has been ported. When a call is made to a number that has been ported, the routing path for the call is established based on the LRN rather than on the dialed number. *See* TRAVIS RUSSELL, SIGNALING SYSTEM #7 640 McGraw-Hill Communications (Fifth Edition 2006).

[1255] Specifically, parties proposing CIC and OCN signaling requirements would like the Commission to mandate inclusion of CIC or OCN in providers' SS7 call signaling or in billing records, as appropriate. *See* GVNW Section XV Comments at 5-6; PAETEC et al. Section XV Comments at 6-7. Parties proposing JIP and LRN signaling requirements assert that such requirements would help solve phantom traffic problems. *See, e.g.*, Frontier Section XV Comments at 13; Rural Associations Section XV Comments at 21-23.

[1256] *See* AT&T Section XV Reply at 18; Verizon Section XV Reply Comments at 33.

[1257] *USF/ICC Transformation NPRM*, 26 FCC Rcd at 4756, para. 632.

[1258] Blooston Section XV Comments at 10; Consolidated Section XV Comments at 37-38.

[1259] For example, as discussed above, commenters request that the Commission require providers to include CIC or OCN codes in signaling information and/or billing records. But, no commenter explains exactly how these proposals would be implemented, given that the CIC field is optional under the current SS7 industry standard. And, the proposals do not provide specific procedures by which IXCs involved in a call path would access the SS7 signaling stream to insert their OCN in the CIC field. Additionally, Sprint commented that if a terminating carrier subtends a tandem, the tandem owner has the responsibility to pass the OCN and CIC to the terminating carrier. Sprint does not offer a legal basis to impose such an obligation on a tandem owner if it is providing transit service. *See* Sprint Section XV Comments at 26.

[1260] *See* ATIS Section XV Comments at 7.

number-based requirements, which have long been at the core of our signaling rules, we decline to include requirements for signaling CIC or OCN in our revised call signaling rules. If the reforms adopted herein prove inadequate to curb problems associated with phantom and unidentifiable traffic, we will revisit measures such as additional signaling mandates at a later date.

728. There is debate in the record about the technical feasibility of proposals relating to JIP. For example, the Nebraska Rural Independent Companies propose that wireless carriers be required to populate the JIP with a two digit state identifier and a two digit MTA code associated with the cell site along with the six-digit NPA-NXX of the originating switch.[1261] But, in reply comments, HyperCube noted that "the JIP can be populated only with the LRN 6-digit NPA-NXX code. There are only six spaces in the field, and therefore wireless carriers cannot be required to populate the field not only with the LRN of the originating switch but also with a two-digit state code and a two-digit MTA code associated with the originating cell site."[1262] Additionally, wireless providers note that JIP does not, in some circumstances, provide accurate information about a call's jurisdiction.[1263] The record pertaining to JIP lacks the specific factual information necessary to resolve conflicting information at this level of detail about the operation, and carrier usage of JIP. Furthermore, as with CIC and OCN signaling, complexities related to JIP signaling are, in our view, best resolved by industry standard setting bodies so that they can be informed by and adapt to changing technology.[1264] Finally, we are reluctant to mandate any particular use of the JIP field as doing so would preclude innovative use of the field for other purposes, such as identification of VoIP traffic, specified in agreements between carriers.[1265]

729. We also note that the OCN and JIP fields provide alternatives to CPN and CN as a means of identifying the originating carrier for a call. We are thus not convinced that signaling requirements related to OCN and JIP will lead to any additional incremental reductions in the phantom traffic problem over our revised rules related to CPN and CN.

c. Enforcement

730. Commenters to the *USF/ICC Transformation NPRM* urged the Commission to consider a number of measures to ensure compliance with our new rules.[1266] As explained below, however, there is

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[1261] *See* Nebraska Rural Companies Section XV Comments at 23-24.

[1262] HyperCube Section XV Reply Comments at 13 n.39.

[1263] *See, e.g.*, AT&T Reply at 19; T-Mobile Section XV Comments at 13.

[1264] Similar conflicting information is present in the record regarding the LRN and its applicability in the call signaling context as well. Several commenters propose requiring the LRN to be included in signaling or in billing records. *See* TDS Section XV Comments at 9; Texas Telephone Section XV Comments at 11-12. Other commenters note that the LRN is not an SS7 parameter and is used primarily for the limited purpose of routing calls to numbers that have been ported to providers other than the carrier to which the number was assigned. *See* AT&T Section XV Reply Comments at 19 n.51. The record before us does not contain sufficiently detailed information to resolve this discrepancy, and, as with other signaling proposals discussed above, we believe these issues are best resolved by industry standards setting bodies.

[1265] *See* XO Section XV Comments at 33.

[1266] *See infra* paras. 731-735, We note that some parties suggested that the Commission expand the scope of the Commission's *T-Mobile Order* to allow all LECs to demand interconnection with all carriers. *See Developing a Unified Intercarrier Compensation Regime; T-Mobile et al. Petition for Declaratory Ruling Regarding Incumbent LEC Wireless Termination Tariffs*, CC Docket No. 01-92, Declaratory Ruling and Report and Order, 20 FCC Rcd 4855 (2005) (*T-Mobile Order*), *petitions for review pending*, *Ronan Tel. Co. et al. v. FCC*, No. 05-71995 (9th Cir. filed Apr. 8, 2005); *see also* ITTA Section XV Comments at 22-23; Rural Associations Section XV Comments at (continued…)

no persuasive evidence that existing enforcement mechanisms and complaint processes are inadequate.[1267] We therefore decline to adopt these enforcement proposals. Parties aggrieved by violations of our phantom traffic rules have a number of options, such as filing an informal or formal complaint.[1268] In addition, the Commission has broad authority to initiate proceedings on its own motion to investigate and enforce its phantom traffic rules.[1269]

731. Some commenters suggest that the Commission impose financial responsibility on the last carrier sending traffic with incomplete billing data.[1270] Under this proposal, the terminating carrier would be allowed to charge its highest rate to the service provider delivering the phantom traffic to it. In turn, an intermediate provider would be able to charge that rate to the service provider that preceded it in the call path until ultimately the carrier that improperly labeled the traffic would be penalized.[1271]

732. We decline to adopt additional measures related to enforcement of our phantom traffic rules. Proposals to impose upstream liability or financial responsibility on carriers threaten to unfairly burden tandem transit and other intermediate providers with investigative obligations. Instead, we agree that the "responsibility – and liability – should lie with the party that failed to provide the necessary information, or that stripped the call-identifying information from the traffic before handing it off."[1272] Moreover, the phantom traffic rules we adopt herein are not intended to ensnare providers that happen to receive incomplete signaling information.[1273] Imposing upstream liability on all carriers in a call path would be likely to generate confusion and result in the unintended consequence of yielding additional phantom traffic disputes.

733. Commenters also advocated for imposition of a "penalty rate" for unidentifiable traffic or treble damages for willful and repeated action, suggesting that this approach will provide "strong

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30; USTelecom Section XV Comments at 5-6; Windstream Section XV Comments at 17-19. We address these issues in Sections XII.C.5 and XVII.N.

1267 In response to suggestions that the Commission encourage use of the complaint process to combat phantom traffic, we reiterate that allegations of violations of our rules will be subject to the Commission's existing enforcement and complaint mechanisms. *See* CenturyLink Section XV Comments at 22; ITTA Section XV Comments at 21-22; Time Warner Cable Section XV Comments at 13-14.

1268 *See* 47 C.F.R. § 1.711. Parties can file an informal complaint by contacting the Enforcement Bureau, which will seek to facilitate a resolution to the issue. *See* 47 C.F.R. §§ 1.716-18. Additionally, parties can avail themselves of the Commission's formal complaint process, if they were not satisfied with the outcome of their informal complaint. 47 U.S.C. § 208; 47 C.F.R. §§ 1.718, 1.720-36. Formal complaint proceedings are similar to court proceedings and are generally resolved on a written record. *See* 47 C.F.R. § 1.720. We note, under the Act, that section 208 complaints can only be brought against common carriers. *See* 47 U.S.C. § 208(a). Parties seeking relief against an interconnected VoIP provider for alleged violations of our signaling rules could seek relief against that interconnected VoIP provider's partnering or affiliated LEC. If this proves to be insufficient, the Commission could reevaluate whether a different approach is appropriate.

1269 *See* 47 U.S.C. §§ 403, 503.

1270 *See* Rural Associations Section XV Comments at 26-27; XO Section XV Comments at 38; NASUCA and NJ Rate Counsel Section XV Reply at 11.

1271 *2008 Order and ICC/USF FNPRM*, 24 FCC Rcd at 6647-49 App. A, paras 336-42; *id.* at 6846-48 App. C, paras. 332-38.

1272 Comcast Section XV Comments at 10.

1273 AT&T Section XV Reply at 16; *see also* Level 3 Section XV Reply at 10; CenturyLink Section XV Reply at 20.

financial incentives to ensure compliance."[1274] We note that commenters advocating for additional enforcement measures such as financial penalties provide no sufficient reason that the Commission's existing enforcement mechanisms are inadequate to address any rule violations.[1275] We also note that a phantom traffic-specific penalty rate or other financial penalty provision would likely divert additional industry and Commission resources to disputes over the applicability and enforcement of the penalty rate. Based on the availability of the Commission's existing enforcement mechanisms, we think it is unlikely that any benefits of an additional phantom-traffic specific enforcement mechanism will outweigh its costs. Therefore, we decline to adopt a "penalty rate" or other financial punishment in connection with phantom traffic.

734. Parties also proposed that the Commission allow selective call blocking, which would permit carriers in the call path to block traffic that is unidentified or for which parties refuse to accept financial responsibility.[1276] We decline to adopt any remedy that would condone, let alone expressly permit, call blocking.[1277] The Commission has a longstanding prohibition on call blocking.[1278] In the *2007 Call Blocking Order*, the Wireline Competition Bureau emphasized that "the ubiquity and reliability of the nation's telecommunications network is of paramount importance to the explicit goals of the Communications Act of 1934, as amended" and that "Commission precedent provides that no carriers, including interexchange carriers, may block, choke, reduce or restrict traffic in any way."[1279] We find no reason to depart from this conclusion. We continue to believe that call blocking has the potential to degrade the reliability of the nation's telecommunications network.[1280] Further, as NASUCA highlights in its reply comments, call blocking ultimately harms the consumer, "whose only error may be relying on an originating carrier that does not fulfill its signaling duties."[1281]

735. *Other Proposals*. Finally, parties proposed that the Commission should impose rules surrounding the proper look-up[1282] and routing for traffic.[1283] Because these proposals are unrelated to the Commission's limited phantom traffic objectives related to signaling, and because we find little evidence

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[1274] GVNW Section XV Comments at 6; *see also* Frontier Section XV Comments at 12; WGA Section XV Comments at 5.

[1275] *See supra* note 1267. Although we decline to adopt any specific enforcement mechanism related to phantom traffic and continue to believe our existing enforcement mechanisms are adequate, we will monitor this issue and, if necessary, may determine that additional measures are appropriate.

[1276] *See, e.g.*, Frontier Section XV Reply at 9; Missouri Commission Section XV Comments at 9; RNK Communications Section XV Comments at 9.

[1277] We note that at least two states currently allow for blocking of intrastate traffic in certain circumstances. *See* Missouri Commission Section XV Comments at 9; Ohio Commission Section XV Comments at 11-12.

[1278] *See Call Blocking Declaratory Ruling*, 22 FCC Rcd at 11629, 11631 paras. 1, 6; *see also Blocking Interstate Traffic in Iowa*, Memorandum Opinion and Order, 2 FCC Rcd 2692 (1987) (denying application for review of Bureau order, which required petitioners to interconnect their facilities with those of an interexchange carrier in order to permit the completion of interstate calls over certain facilities).

[1279] *Call Blocking Declaratory Ruling*, 22 FCC Rcd at 11631, para. 6.

[1280] *Id.* at 11631, para. 5 (internal citation omitted).

[1281] NASUCA and NJ Rate Counsel Section XV Reply at 11.

[1282] *See, e.g.*, CenturyLink Section XV Comments at 24.

[1283] *See, e.g.*, Aventure Section XV Comments at 7-9; Rural Associations Section XV Comments at 29-30.

at this time of a need for additional Commission action, we decline to adopt these proposals.[1284] We believe the changes to the call signaling rules adopted in this Order provide a narrowly tailored and straightforward remedy to the problems of unidentifiable traffic.

XII. COMPREHENSIVE INTERCARRIER COMPENSATION REFORM

736. Consistent with the National Broadband Plan's recommendation to phase out regulated per-minute intercarrier compensation charges,[1285] in this section we adopt bill-and-keep as the default methodology for all intercarrier compensation traffic. We believe setting an end state for all traffic will promote the transition to IP networks, provide a more predictable path for the industry and investors, and anchor the reform process that will ultimately free consumers from shouldering the hidden multi-billion dollar subsidies embedded in the current system.

737. Under bill-and-keep arrangements, a carrier generally looks to its end-users—which are the entities and individuals making the choice to subscribe to that network—rather than looking to other carriers and their customers to pay for the costs of its network. To the extent additional subsidies are necessary, such subsidies will come from the Connect America Fund, and/or state universal service funds. Wireless providers have long been operating pursuant to what are essentially bill-and-keep arrangements, and this framework has proven to be successful for that industry.[1286] Bill-and-keep arrangements are also akin to the model generally used to determine who bears the cost for the exchange of IP traffic, where providers bear the cost of getting their traffic to a mutually agreeable exchange point with other providers.

738. Bill-and-keep has significant policy advantages over other proposals in the record.[1287] A bill-and-keep methodology will ensure that consumers pay only for services that they choose and receive, eliminating the existing opaque implicit subsidy system under which consumers pay to support other carriers' network costs. This subsidy system shields subsidy recipients and their customers from price signals associated with network deployment choices. A bill-and-keep methodology also imposes fewer regulatory burdens and reduces arbitrage and competitive distortions inherent in the current system, eliminating carriers' ability to shift network costs to competitors and their customers.[1288] We have legal

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[1284] *See* AT&T Section XV Reply at 15 n.39; XO Section XV Comments at 38-39.

[1285] *See* National Broadband Plan at 150 (Recommendation 8.14).

[1286] CMRS providers are prohibited from filing interstate access tariffs, *see* 47 C.F.R. § 20.15(c), but may collect access charges from an IXC if both parties agree pursuant to contract. *See Petitions of Sprint PCS and AT&T Corp. for Declaratory Ruling Regarding CMRS Access Charges*, WT Docket No. 01-316, Declaratory Ruling, 17 FCC Rcd 13192, 13198, para. 12 (2002) (*Sprint/AT&T Declaratory Ruling*), *petitions for review dismissed*, *AT&T Corp. v. FCC*, 349 F.3d 692 (D.C. Cir. 2003). Practically speaking, this means that CMRS providers generally do not collect access charges for calls that originate or terminate on their networks. CMRS providers are, however, able to receive reciprocal compensation for eligible traffic that terminates on their networks, although the record indicates that many of those arrangements are also bill-and-keep. *See, e.g.*, Letter from Tamara Preiss, Vice President, Federal Regulatory, Verizon, to Marlene H. Dortch, Secretary, FCC, CC Docket No. 01-92, WC Docket No. 07-135, at 6, 10 (filed June 28, 2010); CTIA *USF/ICC Transformation NPRM* Comments at 36 (explaining that bill-and-keep "is the model that has been successful in the wireless industry"); T-Mobile *USF/ICC Transformation NPRM* Comments at 24 (internal citations omitted) (detailing that "[w]ireless carriers essentially operate now under a bill-and-keep regime, and bill-and-keep, is in large part, the end point of this proposal"); *cf.* ABC Plan, Attach. 5 at 36-37 (commenting that the majority of intraMTA wireless traffic has been, and currently is, exchanged at rates at or below $0.0007 per minute).

[1287] *See infra* Section XII.A.1.

[1288] *See generally*, Letter from Kathleen O'Brien Ham, VP, Federal Regulatory Affairs, T-Mobile, to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 10-90, 07-135, 03-109; CC Docket Nos. 01-92, 96-46; GN Docket No. 09-51 (filed Oct. 20, 2011) (T-Mobile Oct. 20, 2011 *Ex Parte* Letter).

authority to adopt a bill-and-keep methodology as the end point for reform pursuant to our rulemaking authority to implement sections 251(b)(5) and 252(d)(2), in addition to authority under other provisions of the Act, including sections 201 and 332.[1289]

739. We also adopt in this section a gradual transition for terminating access, providing price cap carriers, and competitive LECs that benchmark to price cap carrier rates, six years and rate-of-return carriers, and competitive LECs that benchmark to rate-of-return carrier rates, nine years to reach the end state. We believe that initially focusing the bill-and-keep transition on terminating access rates will allow a more manageable process and will focus reform where some of the most pressing problems, such as access charge arbitrage, currently arise. Additionally, we believe that limiting reform to terminating access charges at this time minimizes the burden intercarrier compensation reform will place on consumers and will help manage the size of the access replacement mechanism adopted herein. We recognize, however, that we need to further evaluate the timing, transition, and possible need for a recovery mechanism for those rate elements–including originating access, common transport elements not reduced, and dedicated transport–that are not immediately transitioned; we address those elements in the FNPRM. The transition we adopt sets a default framework, leaving carriers free to enter into negotiated agreements that allow for different terms.[1290]

A. Bill-and-Keep as the End Point for Reform

740. In this section, we first explain the policy reasons for adopting a bill-and-keep methodology. We then explain our legal authority to comprehensively reform intercarrier compensation and adopt a bill-and-keep methodology as the end state for all traffic. Finally, we explain why, on balance, a national, uniform framework best advances our goals and how states will have a critical role in implementing this national framework.

1. Bill-and-Keep Best Advances the Goals of Reform

741. We adopt a bill-and-keep methodology as a default framework and end state for all intercarrier compensation traffic. We find that a bill-and-keep framework for intercarrier compensation best advances the Commission's policy goals and the public interest, driving greater efficiency in the operation of telecommunications networks[1291] and promoting the deployment of IP-based networks.[1292]

742. *Bill-and-Keep Is Market-Based and Less Burdensome than the Proposed Alternatives.* Bill-and-keep brings market discipline to intercarrier compensation because it ensures that the customer

[1289] *See infra* Section XII.A.2.

[1290] We agree with commenters that "[c]arriers should be free to negotiate commercial agreements that may depart from the default regime." Verizon *USF/ICC Transformation NPRM* Comments at 7.

[1291] *See* National Broadband Plan at 142. *See also* T-Mobile *USF/ICC Transformation NPRM* Comments at 17 (explaining that "LEC requirements that packet-based traffic be converted into TDM further deprive consumers of the full benefits that packet-based technologies can offer. This arrangement also stifles investment. . . ."); Global Crossing *USF/ICC Transformation NPRM* Comments at 7 (stating that "Global Crossing has previously noted that it spends approximately 2,290 man-hours per month managing the intercarrier compensation regime, which accounts for time required to address disputes, bill reconciliation, contract negotiation, routing, and other tasks.").

[1292] *See* AT&T *USF/ICC Transformation NPRM* Reply at 3; *see also* CTIA *USF/ICC Transformation NPRM* Comments at 36; Google *USF/ICC Transformation NPRM* Comments at 9; Sprint *USF/ICC Transformation NPRM* Comments, App. B at 4. *See also* Letter from Stuart Polikoff, VP – Regulatory Policy and Business Development, OPASTCO to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-51, WC Docket Nos. 05-337 and 06-122, CC Docket Nos. 96-45 and 01-92, at 2 (filed Oct. 28, 2009) (urging that "[a]ll intercarrier compensation (ICC) rates transition down to zero over seven years").

who chooses a network pays the network for the services the subscriber receives.[1293] Specifically, a bill-and-keep methodology requires carriers to recover the cost of their network through end-user charges,[1294] which are potentially subject to competition. Under the existing approach, carriers recover the cost of their network from competing carriers through intercarrier charges, which may not be subject to competitive discipline. Thus, bill-and-keep gives carriers appropriate incentives to serve their customers efficiently.[1295]

743. Bill-and-keep is also less burdensome than approaches that would require the Commission and/or state regulators to set a uniform positive intercarrier compensation rate, such as $0.0007. In particular, bill-and-keep reduces the significant regulatory costs and uncertainty associated with choosing such a rate, which would require complicated, time consuming regulatory proceedings, based on factors such as demand elasticities for subscription and usage as well as the nature and extent of competition.[1296] As the Commission has recognized with respect to the existing reciprocal compensation rate methodology, "[s]tate pricing proceedings under the TELRIC [Total Element Long Run Incremental Cost] regime have been extremely complicated and often last for two or three years at a time. . . . The drain on resources for the state commissions and interested parties can be tremendous."[1297] Indeed, the cost of implementing such a framework potentially could outweigh the resulting intercarrier compensation revenues for many carriers.[1298] Moreover, in setting any new intercarrier rate, it would be necessary to rely on information from carriers who would have incentives to maximize their own revenues, rather than ensure socially optimal intercarrier compensation charges.[1299] Thus, the costs of

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[1293] *See infra* Section XII.A.2.

[1294] In certain areas, we recognize that, in addition to end user charges, explicit universal service support may also be appropriate. *See generally* Section XIII.

[1295] *See, e.g.*, Patrick DeGraba, *Central Office Bill and Keep as a Unified Inter-carrier Compensation Regime*, 19 Yale Journal of Regulation 37 (2002) (DeGraba); AT&T *USF/ICC Transformation NPRM* Reply at 23.

[1296] *See, e.g.*, Body of European Regulators for Electronic Communications, *BEREC Common Statement on Next Generation Networks Future Charging Mechanisms/Long Term Termination Issues*, June 2010, http://erg.eu.int/doc/berec/bor_10_24_ngn.pdf, at 24-26, 51 (BEREC Common Statement); *see also* DeGraba at 26-27; *Intercarrier Compensation FNPRM*, 20 FCC Rcd at 4790-92, App. C ("In practice, however, regulators rarely have sufficient information or sufficient resources to establish rates that accurately reflect the cost of providing service. . . . Furthermore, as new technologies and network architectures develop, the challenges associated with setting cost-based rates will only increase.").

[1297] *Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and Resale of Service by Incumbent Local Exchange Carriers*, Notice of Proposed Rulemaking, 18 FCC Rcd 18945 at 18948-49, para. 6 (2003). *See also, e.g.*, Pennsylvania Commission *2008 Order and ICC/USF FNPRM* Comments at 24 (describing the possible adoption of a new incremental cost pricing methodology as imposing an "obligation upon the states to carry out a new series of very complex and expensive proceedings in order to derive cost-based rates"); Verizon *2008 Order and ICC/USF FNPRM* Comments at 47-48 (discussing the burdens associated with the regulatory process of setting reciprocal compensation rates under a new methodology).

[1298] *See, e.g.*, Virginia Commission *August 3 PN* Comments at 6; Vermont Commission *USF/ICC Transformation NPRM* Reply at 6; TCA *2008 Order and ICC/USF FNPRM* Comments at 10; Nebraska PSC *2008 Order and ICC/USF FNPRM* Comments at 7; Leap Wireless *2008 Order and ICC/USF FNPRM* Comments at 10-11.

[1299] *See, e.g.*, BEREC Common Statement at 24; DeGraba at 26-27.

choosing a new positive intercarrier compensation rate would be significant, and a reasonable outcome would be highly uncertain.[1300]

744. *Bill-and-Keep Is Consistent with Cost Causation Principles.* As the *USF/ICC Transformation NPRM* observed, "[u]nderlying historical pricing policies for termination of traffic was the assumption that the calling party was the sole beneficiary and sole cost-causer of a call."[1301] However, as one regulatory group has observed, if the called party did not benefit from incoming calls, "users would either turn off their phone or not pick up calls."[1302] This is particularly true given the prevalence of caller ID, the availability of the national do-not-call registry, and the option of having unlisted telephone numbers.[1303] More recent analyses have recognized that both parties generally benefit from participating in a call, and therefore, that both parties should split the cost of the call. That line of economic research finds that the most efficient termination charge is less than incremental cost, and could be negative.[1304]

[1300] *See, e.g., Application of Verizon New England Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon Long Distance), NYNEX Long Distance Company (d/b/a Verizon Global Networks Inc., for Authorization to Provide In-Region, Interlata Services in Massachusetts*, CC Docket No. 01-9, 16 FCC Rcd 8988 (2001).

[1301] *USF/ICC Transformation NPRM*, 26 FCC Rcd at 4716, para. 525.

[1302] BEREC Common Statement at 28.

[1303] *See, e.g.*, AT&T *USF/ICC Transformation NPRM* Comments at 15 & n.22.

[1304] *See* Benjamin E. Hermalin and Michael L. Katz, *Network Interconnection with Two-Sided User Benefits*, Walter A. Haas School of Business, University of California, Berkeley (2001); *see also* DeGraba at 37-84; Doh-Shin Jeon, Jean-Jacque Laffont and Jean Tirole, *On the "Receiver Pays" Principle*, 35 RAND J. OF ECON., 85 (2004). *See generally*, Wilko Bolt and Alexander F. Tieman, *Social Welfare and Cost Recovery in Two-Sided Markets*, IMF Working Paper, at 103–117, *www.imf.org/external/pubs/ft/wp/2005/wp05194.pdf* (2005); E. Glen Weyl, *A Price Theory of Multi-Sided Platforms*, 100 AM. ECON. REV., 1642 (2010); Alexander White, and E. Glen Weyl, *Imperfect Platform Competition: A General Framework*, http://alex-white.net/Home/Research_files/WWIPC.pdf (2011). *See also, e.g., USF/ICC Transformation NPRM*, 26 FCC Rcd at 4716, para. 525 (citing relevant sources); *Intercarrier Compensation FNPRM*, 20 FCC Rcd at 4782-86, App. C. *See also ISP Remand Order*, 16 FCC Rcd at 9183-85, paras. 71-74; CTIA *USF/ICC Transformation NPRM* Comments at 36 (Bill-and-keep "is also perfectly consistent with the realities of the modern telecommunications network and cost-causation principles. Both the calling and called parties benefit from participating in the call, and a bill-and-keep regime fairly apportions costs premised on that reality – a point the Commission has recognized for a decade.") (internal citations omitted).

Earlier models of interconnection pricing assumed that the calling party was both the cost causer and the sole beneficiary of the call. *See, e.g.*, Jean-Jacques Laffont, Patrick Rey, and Jean Tirole, *Network Competition I: Overview and Non-Discriminatory Pricing*, 29 RAND J. OF ECON., 1 (1998); Jean-Jacques Laffont, Patrick Rey, and Jean Tirole, *Network Competition II: Price Discrimination*, 29 RAND J. OF ECON., 38 (1998); Mark Armstrong, *Network Interconnection in Telecommunications*, 108 THE ECON. J., 545 (1998). Even in this stylized setting a number of results were found that implied that above cost termination charges were inefficient. For example, network providers can tacitly collude through access charges to set monopolistic retail prices, and worse, network providers acting competitively may raise termination charges beyond the monopoly level, harming consumers and themselves. *See, e.g.*, Michael Carter and Julian Wright, *Interconnection in Network Industries*, 14 REV. OF INDUS. ORG., 1 (1999); *see also* Julian Wright, *Access Pricing Under Competition: An Application to Cellular Networks*, 50 J. OF INDUS. ECON., 289 (2002); *see also* Mark Armstrong, *The Theory of Access Pricing and Interconnection*, 1 HANDBOOK OF TELECOMM. ECON., 295 (Cave M. et al., eds. 2002).

In some cases, unregulated networks also wish to mark usage prices up over their incremental costs. *See, e.g.*, Wouter Dessein, *Network Competition in Nonlinear Pricing*, 34 RAND J. OF ECON., 593 (2003); Wouter Dessein, *Network Competition with Heterogeneous Customers and Calling Patterns*, 16 INFO. ECON. AND POLICY, 323 (2004); David Harbord & Marco Pagnozzi, *Network-Based Price Discrimination and "Bill-and-Keep" vs. "Cost-*
(continued…)

745. Moreover, the subscription decisions of the called party play a significant role in determining the cost of terminating calls to that party.[1305] A consequent effect of the existing intercarrier compensation regime is that it allows carriers to shift recovery of the costs of their local networks to other providers because subscribers do not have accurate pricing signals to allow them to identify lower-cost or more efficient providers.[1306] By contrast, a bill-and-keep framework helps reveal the true cost of the network to potential subscribers by limiting carriers' ability to recover their own costs from other carriers and their customers,[1307] even as we retain beneficial policies regarding interconnection, call blocking, and geographic rate averaging.[1308]

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Based" Regulation of Mobile Termination Rates, 10 REV. OF NETWORK ECON. (2010). This means that so long as overall costs can be recovered through other charges, such as a fixed fee, the efficient termination charge is less than the carrier's incremental cost (so that retail prices, after markups, reflect underlying resource costs). *See, e.g.*, Jean-Jacques Laffont & Jean Tirole, COMPETITION IN TELECOMM., Section 2.5 (2000). Similarly, in an analysis of dynamic investment incentives, it was shown that access charges (both origination and termination) should be set below incremental cost. *See* Carlo Cambini and Tommaso Valletti, *Investments and Network Competition,* 36 RAND J. OF ECON., 446 (2005); *see also* Carlo Cambini and Tommaso Valletti, *Network Competition with Price Discrimination: 'Bill and Keep' Is Not So Bad After All*, 81 ECON. LETTERS 205 (2003).

[1305] It is the called party that chooses the carrier that will be used for originating calls from, and terminating calls to, that user.

[1306] This was made possible by virtue of the interrelationship of the tariffed access charge regime, mandatory interconnection and policies against blocking or refusing to deliver traffic and statutory requirements for nationwide averaging of long distance rates. *See, e.g., CLEC Access Reform Order*, 16 FCC Rcd at 9935–36, para. 31; *Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers*, CC Docket Nos. 96-262 and 94-1, Sixth Report and Order, *Low-Volume Long-Distance Users*, CC Docket No. 99-249, Report and Order, *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Eleventh Report and Order, 15 FCC Rcd 12962 (*CALLS Order*), *aff'd in part, rev'd in part, and remanded in part, Texas Office of Public Util. Counsel et al. v. FCC*, 265 F.3d 313 (5th Cir. 2001) (subsequent history omitted).

[1307] *Intercarrier Compensation FNPRM*, 20 FCC Rcd at 4787-88, App. C. Bill-and-keep "rewards efficient carriers and punishes inefficient ones by forcing carriers to incorporate their costs into their own retail rates – which, unlike regulated intercarrier compensation, are subject to competition." AT&T *USF/ICC Transformation NPRM* Reply at 23.

[1308] Under geographic rate averaging, long-distance providers are precluded from charging customers of an interstate service in one state a rate different from that in another state. *See* 47 U.S.C. § 254(g).

We therefore reject the contentions of some parties that the cost of completing calls to their customers from other providers' networks are being imposed on them by the customers of those other networks. *See, e.g.*, NASUCA *USF/ICC Transformation NPRM* Reply at 125; PAETEC et al. *USF/ICC Transformation NPRM* Reply at 27. To the extent that these commenters in reality are contending that both calling and called parties benefit from a call, but not to an equal degree in all cases, they have not provided evidence demonstrating the relative benefit to each party, how that should be factored in to any intercarrier compensation payment owed, nor how the benefits arising from such an approach outweigh the regulatory costs associated with its implementation. *See, e.g.*, Core *USF/ICC Transformation NPRM* Comments at 13-14; State Members *USF/ICC Transformation NPRM* Comments at 152. Some carriers contending that the calling party is the cost causer have acknowledged that, even in the face of non-payment of intercarrier compensation, "it may be self-defeating to 'turn off' a large IXC and leave one's own customers unable to place *or receive* calls carried via that long distance provider." Rural Associations Section XV Comments at 37 (emphasis added).

746. We reject claims that bill-and-keep does not allow for sufficient cost recovery.[1309] In the past, parties have argued that a bill-and-keep approach somehow results in "free" termination.[1310] But bill-and-keep merely shifts the responsibility for recovery from other carrier's customers to the customers that chose to purchase service from that network plus explicit universal service support where necessary.[1311] Such an approach provides better incentives for carriers to operate efficiently by better reflecting those efficiencies (or inefficiencies) in pricing signals to end-user customers.[1312]

747. To the extent carriers in costly-to-serve areas are unable to recover their costs from their end users while maintaining service and rates that are reasonably comparable to those in urban areas, universal service support, rather than intercarrier compensation should make up the difference. In this respect, bill-and-keep helps fulfill the direction from Congress in the 1996 Act that the Commission should make support explicit rather than implicit.[1313]

748. *Consumer Benefits of Bill-and-Keep.* Economic theory suggests that carriers will reduce consumers' effective price of calling, through reduced charges and/or improved service quality. We predict that reduced quality-adjusted prices will lead to substantial savings on calls made, and to increased calling. Economic theory suggests that quality-adjusted prices will be reduced regardless of the extent of competition in any given market,[1314] but will be reduced most where competition is strongest.[1315] These price reductions will be most significant among carriers who, by and large, incur but do not collect termination charges, notably CMRS and long-distance carriers. The potential for benefits to wireless customers is particularly important, as today there are approximately 300 million wireless devices, compared to approximately 117 million fixed lines, in the United States.[1316] Lower termination charges for wireless carriers could allow lower prepaid calling charges and larger bundles of free calls for the

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[1309] The Commission has cited evidence suggesting that the forward-looking incremental cost of terminating traffic was extremely low, and very near $0—certainly much lower than current switched access charges, and even many reciprocal compensation rates. *See, e.g., 2008 Order and ICC/USF FNPRM,* 24 FCC Rcd at 6610-12, 6613-14 App. A, paras. 254-57, 260-61; *id.* at 6808-10, 6811-12, App. C at paras. 249-52, 255-56. *See also* BEREC Common Statement at 48, 51; *see also* Letter from Gary M. Epstein and Richard R. Cameron, Counsel for ICF, to Marlene H. Dortch, Secretary, FCC, CC Docket No. 01-92, at Attach. 3, p. 3 (filed Aug. 17, 2004). *But see* CenturyLink *USF/ICC Transformation NPRM* Comments at 62 (noting possible proliferation of arbitrage if there is inadequate cost recovery).

[1310] *See, e.g.,* Core Section XV Reply at 15; Louisiana Small Company Committee Section XV Comments at 9; KMC Telecom and Xspedia *Intercarrier Compensation FNPRM* Reply at 2.

[1311] *See, e.g.,* AT&T *USF/ICC Transformation NPRM* Reply at 23 (explaining that bill-and-keep would not limit the *amount* of recovery but merely the *source* of that recovery) (emphasis in original).

[1312] *Id.* at 23-24. *See also supra* paras. 742-743.

[1313] *See, e.g.,* VON Coalition *August 3 PN* Comments at 6-7; Vonage Section XV Reply at iii, 12.

[1314] *See, e.g.,* J. Bulow and P. Pfleiderer, *A Note on the Effect of Cost Changes on Prices,* J. OF POLITICAL ECON., 91 (1983).

[1315] *See id.*; *see also,* J. Hausman and G. Leonard, *Efficiencies from the Consumer Viewpoint,* 7 GEO. MASON LAW REVIEW, 707 (1999).

[1316] *See* CTIA, "U.S. Wireless Quick Facts," http://www.ctia.org/advocacy/research/index.cfm/aid/10323; *see also* FCC, Wireline Competition Bureau, *Local Telephone Competition Status as of Dec. 31, 2010,* http://transition.fcc.gov/Daily_Releases/Daily_Business/2011/db1007/DOC-310264A1.pdf.

same monthly price.[1317] For example, carriers presently offer free "in-network" wireless calls at least in part because they do not have to pay to terminate calls on their own network. Lower termination charges could also enable more investment in wireless networks, resulting in higher quality service—e.g., fewer dropped calls and higher quality calls—as well as accelerated deployment of 4G service.[1318] Similarly, IXCs, calling card providers, and VoIP providers will be able to offer cheaper long-distance rates and unlimited minutes at a lower price.

749. Moreover, as carriers face intercarrier compensation charges that more accurately reflect the incremental cost of making a call, consumers will see at least three mutually reinforcing types of benefits. First, carriers operations will become more efficient as they are able to better allocate resources for delivering and marketing existing communications services. Specifically, as described below, bill-and-keep will over time eliminate wasteful arbitrage schemes and other behaviors designed to take advantage of or avoid above-cost interconnection rates, as well as reducing ongoing call monitoring, intercarrier billing disputes, and contract enforcement efforts. Second, carrier decisions to invest in, develop, and market communications services will increasingly be based on efficient price signals.[1319]

750. Third, and perhaps most importantly, we expect carriers will engage in substantial innovation to attract and retain consumers. New services that are presently offered on a limited basis will be expanded, and innovative services and complementary products will be developed. For example, with the substantial elimination of termination charges under a bill-and-keep methodology, a wide range of IP-calling services are likely to be developed and extended,[1320] a process that may ultimately result in the sale of broadband services that incorporate voice at a zero or nominal charge. All these changes will bring substantial benefits to consumers.

751. The impact of the Commission's last substantial intercarrier compensation reform supports our view that consumers will benefit significantly from today's reforms. In 2000, the *CALLS Order* reduced interstate access charges.[1321] At the same time, in ways similar to the present reforms, we imposed modest increases in the fixed charges faced by end users.[1322] In the *CALLS Order*, the Commission forecasted that reduced interstate access rates would bring a range of efficiency benefits.[1323] Although some of these forecasts were met with initial skepticism,[1324] end-users in fact realized benefits

[1317] Previous ICC reforms have translated into wireless consumer rate reductions and an increase in service offerings, we anticipate a similar outcome as a result of the reform adopted herein. *See, e.g.*, Letter from Scott K. Bergmann, Assistant Vice President, Regulatory Affairs, CTIA to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 10-90, 09-51, 07-135, 05-337, 03-109, CC Docket Nos. 01-92, 96-45 at 5 (filed Sept. 29, 2011).

[1318] *See* Letter from Charles McKee,VP, Federal and State Regulatory, Sprint, to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 10-90, 07-135, 05-337, 03-109, GN Docket No. 09-51, CC Docket No. 01-92, 96-45, Attach. at 1 (filed Oct. 3, 2011) ("Sprint will be able to invest such expense savings in enhancing its network and expanding its provision of wireless broadband services, while continuing to provide consumers with industry-leading pricing.").

[1319] *See, e.g.* Steven Landsburg (2011), *Price Theory and Applications*, South-Western Publishers, p. 36.

[1320] For example, bill-and-keep could allow substantial extension and development of services such as GoogleVoice and Skype.

[1321] *See CALLS Order*, 15 FCC Rcd 12962, 12975-76 para. 30.

[1322] *See id.*

[1323] *See generally*, *CALLS Order*, 15 FCC Rcd 12962-74, paras. 1-28.

[1324] NJ Division of the Ratepayer Advocate *CALLS NPRM* Comments at 8-9 ("Under this proposal, residential customers would see a cost increase of $50 million per month if this proposal is adopted. This cost would increase (continued…)

that exceeded most expectations. In particular, the *CALLS Order* resulted in substantial decreases in calling prices, but in largely unexpected ways. As a result of the *CALLS Order*, retail toll charges fell sharply, bringing average customer expenditures per minute of interstate toll calling down 18 percent during the year 2000.[1325] However, rather than merely reducing per-minute rates, wireless carriers started offering a new form of pricing, a fixed fee for a "bucket" of minutes, and ended distance-based pricing. As a result of these price declines, the gains in consumer surplus for wireless users in the United States from the *CALLS Order* were estimated to be about $115 billion per year.[1326] Competitive pressure from wireless providers brought similar changes to fixed line carriers, who began offering unlimited domestic calls. These price declines and innovations also had important indirect effects, allowing end-users to fundamentally change the way they used telephony services. For example, lower calling charges enabled a substantial and ongoing shift from landlines to wireless. In short, the Commission's prior intercarrier compensation reform led to more convenient access to telecommunication services and substantially lower costs for long-distance calls.

752. *Bill-and-Keep Eliminates Arbitrage and Marketplace Distortions.* Bill-and-keep will address arbitrage and marketplace distortions arising from the current intercarrier compensation regimes, and therefore will promote competition in the telecommunications marketplace. Intercarrier compensation rates above incremental cost have enabled much of the arbitrage that occurs today,[1327] and to the extent that such rates apply differently across providers, have led to significant marketplace distortions. Rates today are determined by looking at the average cost of the entire network, whereas a bill-and-keep approach better reflects the incremental cost of termination,[1328] reducing arbitrage incentives. For example, based on a hypothetical calculation of the cost of voice service on a next generation network providing a full range of voice, video, and data services, one study estimated that the incremental cost of delivering an average customer's total volume of voice service could be as low as $0.000256 per month; on a per minute basis, this incremental cost would translate to a cost of $0.0000001 per minute.[1329] Moreover, non-voice traffic on next generation networks (NGNs) is growing much more

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to $200 million per month if the SLC charge reaches the cap of $7.00 per month. In the short term, there is a huge monthly cost increase to consumers and over the long term, there could be a $2.4 billion dollar increase on an annualized basis to consumers."). *See* NASUCA *CALLS NPRM* Comments at 7-15 (predicting that the CALLS proposal will negatively affect consumers by increasing the rates paid, reducing consumer confidence and negatively impacting low income and low volume end users).

[1325] *See* Federal Communications Commission/WCB (2008), *Reference Book on Rates, Price Indices, and Household Expenditures for Telephone Service,* Table 1.15, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-284934A1.pdf. For three years, 1997-1999, average customer expenditures per minute of interstate toll calls held constant at $0.11 per minute. In 2000, average customer expenditures per minute of interstate toll calls fell 18 percent to $0.09 cents per minute. However, this likely understates the full decline in reduction as a result of the Commission's reforms because the access charge reduction occurred in July of 2000. In 2001, the average rate fell to $0.08, or 27 percent from the $0.11 starting point. Rates fell again in 2002, to $0.07 cents per minute, and again in 2003 to $0.06 cents. *See id.*

[1326] *See* ABC Plan, at Attach. 4, para. 11.

[1327] *See supra* paras. 662-666. We therefore reject claims that arbitrage arises solely because of *differences* in rates among jurisdictions of traffic or otherwise regardless of the absolute rate level. *See, e.g.,* CRUSIR *USF/ICC Transformation NPRM* Comments at 11-12; Rural Carriers - State USF *USF/ICC Transformation NPRM* Comments at 2-3; ITTA *USF/ICC Transformation NPRM* Comments at 39-40.

[1328] *See infra note* 1304. *See, e.g., 2008 Order and USF/ICC FNPRM,* 24 FCC Rcd at 6610-14 paras. 253-61

[1329] *See* Letter from Henry Hultquist, Vice President – Federal Regulatory, AT&T Services, Inc. to Marlene H. Dortch, Secretary, FCC, CC Docket Nos. 96-45, 01-92; WC Docket Nos. 99-68, 05-337, 07-135, at 4 (filed Oct. 13, 2008) (incremental cost of a softswitch is between 0.0010 and 0.00024).

rapidly than voice traffic, and under any reasonable methods of cost allocation, the share of voice cost to total cost will continue to be small in an NGN.[1330] Record evidence indicates that the incremental cost of termination for circuit-switched networks is likewise extremely small.[1331]

753. Our conclusion that the incremental cost of call termination is very nearly zero, coupled with the difficulty of appropriately setting an efficient, positive intercarrier compensation charge, further supports our adoption of bill-and-keep.[1332] Exact identification of efficient termination charges would be extremely complex, and considering the costs of metering, billing, and contract enforcement that come with a non-zero termination charge, we find that the benefits obtained from imposing even a very careful estimate of the efficient interconnection charge would be more than offset by the considerable costs of doing so.[1333]

754. Some parties have expressed concerns that bill-and-keep arrangements will encourage carriers to "dump" traffic on other providers' terminating network, because the cost of termination to the carrier delivering the traffic will be zero.[1334] Such concerns, however, appear to be largely speculative; no commenter has identified a concrete reason why any carrier would engage in such "dumping" or how it would do so. Indeed, there has been no evidence that any such "dumping" has occurred in the wireless industry, which has operated under a similar framework. Even so, if a long distance carrier decided to deliver all of its traffic to a terminating LECs' tandem switch, that practice could result in tandem exhaust, requiring the terminating LEC to invest in additional switching capacity. To help address this concern, we confirm that a LEC may include traffic grooming requirements in its tariffs. These traffic grooming requirements specify when a long distance carrier must purchase dedicated DS1 or DS3 trunks to deliver traffic rather than pay per-minute transport charges, a determination based on the amount of traffic going to a particular end office. We believe this accountability and additional information will deter concerns regarding traffic dumping.[1335]

[1330] *See, e.g., Ref. 2009-70-MR-EC-Future of Interconnection Charging Methods* at 74, Nov. 23, 2010, http://ec.europa.eu/information_society/policy/ecomm/doc/library/ext_studies/2009_70_mr_final_study_report_F_101123.pdf ("In the future, the voice total costs will be much smaller in an 'NGN only' network than in a 'PSTN only' legacy network. The share of the voice total costs in the total costs of the network will be small in an NGN network."); *see also* Letter from Donna N. Lampert, Counsel for Google, to Marlene H. Dortch, Secretary, FCC, CC Docket Nos. 01-92, 96-45; WC Docket Nos. 10-90, 05-337; GN Docket No. 09-51, Attach. at 2-7 (filed June 16, 2011) (Google June 16, 2011 *Ex Parte* Letter) (arguing that "standalone voice will represent a vanishingly small segment of overall network traffic" and illustrating "the changing nature of the relationship between traditional voice traffic and modern IP-based communications"). "The move to bill-and-keep would rid the intercarrier compensation system of the inefficiencies and arbitrage opportunities that have plagued it and speed the transition to more efficient feature-rich IP networks. . . ." T-Mobile Oct. 20, 2011 *Ex Parte* Letter at 1.

[1331] *See, e.g., 2008 Order and ICC/USF FNPRM*, 24 FCC Rcd at 6610-14, paras. 253-61; 6808-12, paras. 248-56.

[1332] We note that the statutory text of section 252(d)(2) provides that the methodology for reciprocal compensation should allow for the recovery of the "additional costs" of a call which equals incremental cost, not the average or total cost of transporting or terminating a call. *See* 47 U.S.C. § 252(d)(2)(A)(ii) (noting that costs should be approximate "the additional costs of terminating such calls").

[1333] We acknowledge that it is also possible that in some instances, the efficient termination rates of preceding models would not allow overall cost recovery. In that case, while the efficient *cost-covering* termination rate could lie above incremental cost, we also conclude that it is more efficient to ensure cost recovery via direct subsidies, such as the CAF, than by distorting usage prices.

[1334] *See, e.g.*, Verizon *USF/ICC Transformation NPRM* Comments at 13-16.

[1335] We would expect that these handoffs would recognize the same engineering principles that govern current network configurations. To the extent that one party to the interconnection agreement desired to deviate from those (continued...)

755. *Bill-and-Keep Is Appropriate Even If Traffic Is Imbalanced.* The Commission initially permitted states to impose bill-and-keep arrangements on providers, but did so with the caveat that traffic should be roughly in balance.[1336] At the time, the Commission reasoned that carriers incur costs for terminating traffic, and bill-and-keep may not enable the recovery of such costs from other carriers.[1337] The Commission also expressed concern that, in a reciprocal compensation arrangement, bill-and-keep may "distort carriers' incentives, encouraging them to overuse competing carriers' termination facilities by seeking customers that primarily originate traffic."[1338]

756. In light of technological advancements and our rejection of the calling party network pays model in favor of a model that better tracks cost causation principles, we revisit the Commission's prior concerns and conclusions supporting the "balanced traffic limitation."[1339] First, we reject claims that, as a policy matter, bill-and-keep is only appropriate in the case of roughly balanced traffic.[1340] Concerns about the balance of traffic exchanged reflect the view that the calling party's network should bear all the costs of a call. Given the understanding that both the calling and called party benefit from a call, the "direction" of the traffic—i.e., which network is originating or terminating the call—is no longer as relevant.[1341] Under bill-and-keep, "success in the marketplace will reflect a carrier's ability to serve customers efficiently, rather than its ability to extract payments from other carriers."[1342] Additionally, bill-and-keep is most consistent with the models used for wireless and IP networks, models that have flourished and promoted innovation and investment without any symmetry or balanced traffic requirement.[1343]

757. Second, as already explained, we reject the assertion that bill-and-keep does not enable cost recovery. Although a bill-and-keep approach will not provide for the recovery of certain costs via

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standards, the interconnection agreement could establish the amount, if any, the deviating entity should compensate the other carrier. We seek comment on these and other possible issues related to traffic dumping in the attached FNPRM. *See supra* Section XVII.N.

[1336] 47 C.F.R. § 51.713(b) ("A state commission may impose bill-and-keep arrangements if the state commission determines that the amount of telecommunications traffic from one network to the other is roughly balanced with the amount of telecommunications traffic flowing in the opposite direction, and is expected to remain so, and no showing has been made pursuant to § 51.711(b) [permitting asymmetrical rates based on a cost study]").

[1337] *Local Competition First Report and Order*, 11 FCC Rcd at 16055, para. 1112.

[1338] *Id; but see ISP Remand Order*, 16 FCC Rcd at 9183-85, paras. 71-74.

[1339] As such, we revise the relevant rules as described in Appendix A below.

[1340] *See* COMPTEL *USF/ICC Transformation NPRM* Comments at 33-34; Cincinnati Bell *USF/ICC Transformation NPRM* Reply at 11-12; Cbeyond et al. *USF/ICC Transformation NPRM* Comments at 14-15; EarthLink *USF/ICC Transformation NPRM* Reply at 9; PAETEC et al. *USF/ICC Transformation NPRM* Reply at 17; Letter from Jeffrey S. Lanning, Ass't Vice President – Federal Regulatory Affairs, CenturyLink, to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 10-90, 07-135, 06-122, 05-337, 04-36, 03-109, CC Docket Nos. 01-92, 99-200, 99-68, 96-98, 96-45, GN Docket No. 09-45 at 3 (filed Oct. 21, 2011) (CenturyLink Oct. 21, 2011 *Ex Parte* Letter). We also discuss below certain arguments that, in the context of reciprocal compensation under the section 251 and 252 framework, bill-and-keep only may be lawfully imposed in the context of roughly balanced traffic. *See infra* XII.A.2.

[1341] *See supra* paras. 744-747.

[1342] *Intercarrier Compensation FNPRM*, 20 FCC Rcd at 4787, App. C.

[1343] For instance, commenters suggest that "eventually most traffic will flow over VoIP" and "the only barriers to such migration are the antiquated ICC regimes." MetroPCS *August 3 PN* Comments at 8.

intercarrier compensation, it will still allow for cost recovery via end-user compensation and, where necessary, explicit universal service support.[1344] We find that although the statute provides that each carrier will have the opportunity to recover its costs, it does not entitle each carrier to recover those costs from another carrier, so long as it can recover those costs from its own end users and explicit universal service support where necessary.

758. As a result, we depart from the Commission's earlier articulated concern that bill-and-keep distorts carriers incentives. To the contrary, we conclude, based on policy and economic theory, that bill-and-keep best addresses the significant arbitrage incentives inherent in today's system.[1345]

759. These conclusions are consistent with the Commission's more recent consideration of bill-and-keep arrangements in the context of ISP-bound traffic. Specifically, in the *ISP Remand Order*, the Commission stated that its initial "concerns about economic inefficiencies associated with bill and keep missed the mark" because they incorrectly assumed that the "calling party was the sole cost causer of the call."[1346] The Commission tentatively concluded that bill-and-keep would provide a viable solution to the market distortions caused by ISP-bound traffic.[1347] Indeed, the Commission's experience with ISP-bound traffic suggests that a bill-and-keep approach may be most efficient where the traffic is not balanced because the obligation to pay reciprocal compensation in such situations may give rise to uneconomic incentives.[1348] We therefore conclude it is appropriate to repeal section 51.713 of our rules.[1349]

2. Legal Authority

760. Our statutory authority to implement bill-and-keep as the default framework for the exchange of traffic with LECs flows directly from sections 251(b)(5) and 201(b) of the Act.[1350] Section 251(b)(5) states that LECs have a "duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications."[1351] Section 201(b) grants the Commission authority to "prescribe such rules and regulations as may be necessary in the public interest to carry out the provisions of this Act."[1352] In *AT&T Corp. v. Iowa Utilities Board*, the Supreme Court held that "the grant in § 201(b) means what it says: The FCC has rulemaking authority to carry out the 'provisions of this Act,'

[1344] *See infra* Section XIII.

[1345] We find that the adoption of a bill-and-keep methodology will help address long-term arbitrage problems while access stimulation and phantom traffic rules adopted today will address arbitrage in the near term. *See supra* Section XI.

[1346] *See Intercarrier Compensation for ISP-Bound Traffic*, CC Docket Nos. 96-98, 99-68, Order on Remand and Report and Order, 16 FCC Rcd 9151 at 9183-83, paras. 71-74 (2001) (*ISP Remand Order*), *remanded but not vacated by WorldCom, Inc. v. FCC*, 288 F.3d 429 (D.C. Cir. 2002).

[1347] *See id.* at 9155, para. 6.

[1348] As discussed above, bill-and-keep avoids the incentives for arbitrage that can arise from excessive intercarrier compensation rates without imposing the regulatory costs of other regimes. *See supra* paras. 752-754.

[1349] *See* 47 C.F.R. § 51.713. *See supra* Appendix A.

[1350] We have additional statutory authority under section 332 to regulate interconnection arrangements involving CMRS providers. *See infra* paras. 834-836.

[1351] 47 U.S.C. § 251(b)(5).

[1352] 47 U.S.C. § 201(b).

which include §§ 251 and 252."[1353] As discussed below, we may exercise this rulemaking authority to define the types of traffic that will be subject to section 251(b)(5)'s reciprocal compensation framework and to adopt a default compensation mechanism that will apply to such traffic in the absence of an agreement between the carriers involved.

761. *The Scope of Section 251(b)(5).* Section 251(b)(5) imposes on all LECs the "duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications." The Commission initially interpreted this provision to "apply only to traffic that originates and terminates within a local area."[1354] In the 2001 *ISP Remand Order*, however, the Commission noted that its initial reading is inconsistent with the statutory terms.[1355] The Commission explained that section 251(b)(5) does not use the term "local,"[1356] but instead speaks more broadly of the transport and termination of "telecommunications."[1357] As defined in the Act, the term "telecommunications" means the "transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received"[1358] and thus encompasses communications traffic of any geographic scope (e.g., "local," "intrastate," or "interstate") or regulatory classification (e.g., "telephone exchange service,"[1359] "telephone toll service,"[1360] or "exchange access"[1361]). The Commission reiterated this interpretation of section 251(b)(5) in its *2008 Order and ICC/USF FNPRM*,[1362] and we proposed in the *ICC/USF Transformation NPRM* to make clear that section 251(b)(5) applies to "all telecommunications, including access traffic."[1363]

762. After reviewing the record, we adopt our proposal and conclude that section 251(b)(5) applies to traffic that traditionally has been classified as access traffic. Nothing in the record seriously calls into question our conclusion that access traffic is one form of "telecommunications." By the express terms of section 251(b)(5), therefore, when a LEC is a party to the transport and termination of access traffic, the exchange of traffic is subject to regulation under the reciprocal compensation framework.

763. We recognize that the Commission has not previously regulated access traffic under section 251(b)(5). The reason, as the Commission has previously explained,[1364] is section 251(g).[1365]

[1353] *AT&T v. Iowa Utils. Bd.*, 525 U.S. 366, 378 (1999).

[1354] *Local Competition First Report and Order*, 11 FCC Rcd at 16013 para. 1034.

[1355] *See generally ISP Remand Order*, 16 FCC Rcd 9151 (2001).

[1356] *ISP Remand Order*, 16 FCC Rcd at 9166-67 para. 34.

[1357] *ISP Remand Order*, 16 FCC Rcd at 9165-66 para. 31-32.

[1358] 47 U.S.C. § 153(43).

[1359] *See id.* at § 153(47).

[1360] *See id.* at § 153(48).

[1361] *See id.* at § 153(16).

[1362] *2008 Order and ICC/USF FNPRM*, 24 FCC Rcd at 6479, paras. 7-8.

[1363] *USF/ICC Transformation NPRM*, 26 FCC Rcd at 4712-13, para. 514.

[1364] *ISP Remand Order*, 16 FCC Rcd at 9165-66 para. 31; *2008 Order and ICC/USF FNPRM*, 24 FCC Rcd at 6483, para. 16.

[1365] 47 U.S.C. § 251(g).

Section 251(g) is a "transitional device"[1366] that requires LECs to continue "provid[ing] exchange access, information access, and exchange services for such access to interexchange carriers and information service providers in accordance with the same equal access and nondiscriminatory interconnection restrictions and obligations (including receipt of compensation)" previously in effect "until such restrictions and obligations are explicitly superseded by regulations prescribed by the Commission."[1367] Section 251(g) thus preserved the pre-1996 Act regulatory regime that applies to access traffic, including rules governing "receipt of compensation," and thereby precluded the application of section 251(b)(5) to such traffic "unless and until the Commission by regulation should determine otherwise."[1368]

764. In this Order, we explicitly supersede the traditional access charge regime and, subject to the transition mechanism we outline below, regulate terminating access traffic in accordance with the section 251(b)(5) framework. Consistent with our approach to comprehensive reform generally and the desire for a more unified approach, we find it appropriate to bring all traffic within the section 251(b)(5) regime at this time, and commenters generally agree.[1369] Doing so is key to advancing our goals of encouraging migration to modern, all IP networks; eliminating arbitrage and competitive distortions; and eliminating the thicket of disparate intercarrier compensation rates and payments that are ultimately borne by consumers. Even though the transition process detailed below is limited to terminating switched access traffic and certain transport traffic, we make clear that the legal authority to adopt the bill-and-keep methodology described herein applies to all intercarrier compensation traffic. As noted below, we seek comment on the transition and recovery for originating access and transport in the accompanying FNPRM.

765. We reject arguments that section 251(b)(5) does not apply to intrastate access traffic. Like other forms of carrier traffic, intrastate access traffic falls within the scope of the broad term "telecommunications" used in section 251(b)(5). "Had Congress intended to exclude certain types of telecommunications traffic," such as "local" or "intrastate" traffic, "from the reciprocal compensation framework, it could have easily done so by using more restrictive terms to define the traffic subject to section 251(b)(5)."[1370] Nor do we believe that section 2(b) of the Act, which generally preserves state authority over intrastate communications, bears on our interpretation of section 251(b)(5).[1371] As the Supreme Court noted, "[s]uch an interpretation [of section 2(b)] would utterly nullify the 1996 amendments, which clearly 'apply' to intrastate services, and clearly confer 'Commission jurisdiction'

[1366] *WorldCom v. FCC*, 288 F.3d 429, 430 (D.C. Cir. 2002), *cert. denied*, 538 U.S. 1012 (2003); *see also Competitive Tel. Ass'n v. FCC*, 309 F.3d 8, 15 (D.C. Cir. 2002).

[1367] 47 U.S.C. § 251(g).

[1368] *ISP Remand Order*, 16 FCC Rcd at 9169, para. 39.

[1369] *See USF/ICC Transformation NPRM*, 26 FCC Rcd at 4711, para. 512. *See generally id.* at 4710-15, paras. 509-22 (seeking comment on the Commission's legal authority to accomplish comprehensive intercarrier compensation reform). *See* AT&T *USF/ICC Transformation NPRM* Comments at 38-43; CBeyond et al. *USF/ICC Transformation NPRM* Comments at 7-11; Comcast *USF/ICC Transformation NPRM* Comments at 6-8; MetroPCS *USF/ICC Transformation NPRM* Comments at 9-12; Time Warner Cable *USF/ICC Transformation NPRM* Comments at 3-5; *but see* NARUC *USF/ICC Transformation NPRM* Comments at 10-12.

[1370] *USF/ICC Transformation NPRM*, 26 FCC Rcd at 4712, para. 513; *see* NARUC *USF/ICC Transformation NPRM* Comments at 10.

[1371] *See* Massachusetts DTC *USF/ICC Transformation NPRM* Comments at 20; New York Commission *USF/ICC Transformation NPRM* Comments at 12; State Members *USF/ICC Transformation NPRM* Comments at 143; NASUCA *August 3 PN* Comments at 30.

over some matters."[1372] Indeed, if section 2(b) limited the scope of section 251(b)(5), we could not apply the reciprocal compensation framework even to local traffic between a CLEC and an ILEC—the type of traffic that has been subject to our reciprocal compensation rules since the Commission implemented the 1996 Act. We see no reason to adopt such an absurd reading of the statute.

766. We also reject arguments that sections 251(g) and 251(d)(3) somehow limit the scope of the "telecommunications" covered by section 251(b)(5).[1373] Whatever protections these provisions provide to state access regulations, it is clear that those protections are not absolute. As noted above, section 251(g) preserves access charge rules only during a transitional period, which ends when we adopt superseding regulations. Accordingly, to the extent section 251(g) has preserved state intrastate access rules against the operation of section 251(b)(5) until now, this rulemaking Order supersedes that provision.[1374]

767. Section 251(d)(3) states that "[i]n prescribing and enforcing regulations to implement the requirements of this section, the Commission shall not preclude the enforcement of any regulation, order, or policy of a State commission that— (A) establishes access and interconnection obligations of local exchange carriers; (B) is consistent with the requirements of this section; and (C) does not substantially prevent implementation of the requirements of this section and the purposes of this part."[1375] As the Commission has previously observed, "section 251(d)(3) of the Act independently establishes a standard

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[1372] *AT&T v. Iowa Utils. Bd.*, 525 U.S. at 380.

[1373] *See* Massachusetts DTC *USF/ICC Transformation NPRM* Comments at 20-21; NARUC *USF/ICC Transformation NPRM* Comments at 12; State Members *USF/ICC Transformation NPRM* Comments at 143-144; *see also* Ohio Commission *USF/ICC Transformation NPRM* Comments at 58.

[1374] Commenters have different views on whether section 251(g) preserves the intrastate as well as interstate access regime. *Compare* Massachusetts DTC *USF/ICC Transformation NPRM* Comments at 20-21; Arizona Commission *USF/ICC Transformation NPRM* Reply at 4-5 *with* Nebraska Rural Companies *August 3 PN* Comments at 19. If section 251(g) does not apply to state access regulations, it is unclear what other provision of the Act would prevent section 251(b)(5) from directly applying to intrastate access traffic, given that section 251(d)(3) does not speak to the preemptive effect of the statute. As we noted in the *Local Competition First Report and Order*, "although section 251(g) does not directly refer to intrastate access charge mechanisms, it would be incongruous to conclude that Congress was concerned about the effects of the potential disruption to the interstate access charge system, but had no such concerns about the effects on analogous intrastate mechanisms." *Local Competition First Report and Order*, 11 FCC Rcd at 15869, para. 732. *See also, e.g., Competitive Telecomms. Ass'n v. FCC*, 117 F.3d 1068, 1072 (8th Cir. 1997) (*Competitive Telecomms. Ass'n*) (finding it "clear from the Act that Congress did not intend all access charges to move to cost-based pricing, at least not immediately. The Act plainly preserves certain rate regimes already in place."). Moreover, as we explained in the *USF/ICC Transformation NPRM*, "[t]he court order accompanying the AT&T consent decree made clear that the decree required access charges to be used in both the interstate and intrastate jurisdictions: 'Under the proposed decree, state regulators will set access charges for intrastate interexchange service and the FCC will set access charges for interstate interexchange service.' *AT&T*, 552 F. Supp. at 169 n.161. Because both the interstate and intrastate access charge systems were created by the same consent decree, it is reasonable to conclude that both systems were preserved by section 251(g)." *USF/ICC Transformation NPRM*, 26 FCC Rcd at 4712 n.750. We need not resolve this issue, however, because all traffic terminated on a LEC will, going forward, be governed by section 251(b)(5) regardless of whether section 251(g) previously covered the state intrastate access regime.

[1375] 47 U.S.C. § 251(d)(3). We note that section 261(c) likewise preserves state authority to "impos[e] requirements on a telecommunications carrier for intrastate services that are necessary to further competition in the provision of telephone exchange service or exchange access, *as long as the State's requirements are not inconsistent with this part or the Commission's regulations to implement this part.*" 47 U.S.C. § 261(c) (emphasis added).

very similar to the judicial conflict preemption doctrine,"[1376] and "[i]ts protections do *not* apply when the state regulation is inconsistent with the requirements of section 251, *or* when the state regulation substantially prevents implementation of the requirements of section 251 or the purposes of sections 251 through 261 of the Act."[1377] Moreover, "in order to be consistent with the requirements of section 251 and not 'substantially prevent' implementation of section 251 or Part II of Title II, state requirements must be consistent with the FCC's implementing regulations."[1378] In other words, section 251(d)(3) instructs the Commission not to preempt state regulations that are consistent with and promote federal rules and policies, but it does not protect state regulations that frustrate the Act's policies or our implementation of the statute's requirements.[1379] As discussed in this Order, we are bringing all telecommunications traffic terminated on LECs, including intrastate switched access traffic, into the section 251(b)(5) framework to fulfill the objectives of section 251(b)(5) and other provisions of the Act.[1380] Consequently, we find that, to the extent section 251(d)(3) applies in this context, it does not prevent us from adopting rules to implement the provisions of section 251(b)(5) and applying those rules to traffic traditionally classified as intrastate access.[1381]

768. Finally, we reject the view of some commenters that the pricing standard set forth in

[1376] *BellSouth Telecommunications, Inc. Request for Declaratory Ruling that State Commissions May Not Regulate Broadband Internet Access Services by Requiring BellSouth to Provide Wholesale or Retail Broadband Services to Competitive LEC UNE Voice Customers*, WC Docket No. 03-251, Memorandum Opinion and Order and Notice of Inquiry, 20 FCC Rcd 6830 at 6839, para. 19 (2005) (footnote references omitted).

[1377] *Id.* at 6842, para. 23 (emphasis in original).

[1378] *Local Competition First Report and Order*, 11 FCC Rcd at 15550, para. 103.

[1379] In light of our interpretation of section 251(d)(3), we need not resolve whether "[t]he word 'access' in section 251(d)(3) . . . refers not to access charge obligations, but to unbundled network element requirements." *See* ABC Plan Proponents *August 3 PN* Reply at 22-23.

[1380] *See supra* Section XII.A.

[1381] We also disagree with commenters' claims that the timing requirements of section 251(d)(1) mean that, if the Commission had authority to supersede existing intrastate access regulations, such authority expired "fifteen years ago." *See* State Members *USF/ICC Transformation NPRM* Comments at 144. Section 251(d)(1) provides that "[w]ithin 6 months after [February 8, 1996,] the Commission shall complete all actions necessary to establish regulations to implement the requirements of this section." 47 U.S.C. § 251(d)(1). However, the actions that were "necessary" to implement section 251 at the time of the 1996 Act do not constitute the entire universe of regulations that may be necessary or appropriate to implement those provisions in the future. Thus, although the Commission adopted initial regulations implementing section 251(b)(5) in the *Local Competition First Report and Order*, it has modified them since. *See, e.g., ISP Remand Order*, 16 FCC Rcd 9151 (2001). Our interpretation also is reinforced by the historical relationship between access charges as implicit subsidy mechanisms and the goal of universal service. Although Congress provided a six month deadline for the initial implementation of section 251, it did not provide a similar deadline for implementing the universal service requirements of section 254. As the Eighth Circuit recognized, if access charges moved immediately to the section 251(b)(5) framework, it potentially could threaten universal service given the lack of a six month deadline for the establishment of explicit universal service support mechanisms. *See Competitive Telecomms. Ass'n*, 117 F.3d at 1073-76. We note that the Commission did, in fact, assert authority to address intrastate access charges in the *Local Competition First Report and Order*, 11 FCC Rcd at 15869, paras. 732-33, although that action was reversed by this same *Competitive Telecomms. Ass'n* decision. *See Competitive Telecomms. Ass'n*, 117 F.3d at 1075 n.5. That decision preceded the Supreme Court's holding that the Commission has rulemaking authority under section 201(b) to implement the requirements of section 251 of the Act. *See Iowa Utils. Bd. v. FCC*, 525 U.S. 366, 377-86 (1999).

section 252(d)(2)(A) limits the scope of section 251(b)(5).[1382] As the Commission explained in the *2008 Order and ICC/USF FNPRM*, section 252(d)(2)(A)(i) "deals with the mechanics of who owes what to whom, it does not define the scope of traffic to which section 251(b)(5) applies."[1383] The Commission noted that construing "the pricing standards in section 252(d)(2) to limit the otherwise broad scope of section 251(b)(5)"[1384] would nonsensically suggest that "Congress intended the tail to wag the dog."[1385] We reaffirm that conclusion here.

769. *Authority To Adopt Bill-and-Keep as a Default Compensation Standard.* We conclude that we have the statutory authority to establish bill-and-keep as the default compensation arrangement for all traffic subject to section 251(b)(5). That includes traffic that, prior to this Order, was subject to the interstate and intrastate access regimes, as well as traffic exchanged between two LECs or a LEC and a CMRS carrier.

770. Section 201(b) states that "[t]he Commission may prescribe such rules and regulations as may be necessary in the public interest to carry out the provisions of this Act."[1386] As the Supreme Court held in *Iowa Utilities Board*, section 201(b) of the Act "means what it says: The FCC has rulemaking authority to carry out the 'provisions of this Act,' which include §§ 251 and 252."[1387] Moreover, section 251(i) of the Act states that "[n]othing in this section [section 251] shall be construed to limit or otherwise affect the Commission's authority under section 201."[1388] Section 251(i) "fortifies [our] position" that we have authority to regulate the default compensation arrangement applicable to traffic subject to section 251(b)(5).[1389]

771. We conclude that we have statutory authority to establish bill-and-keep as a default compensation mechanism with respect to interstate traffic subject to section 251(b)(5).[1390] Section 201 has long conferred authority on the Commission to regulate interstate communications to ensure that "charges, practices, classifications, and regulations" are "just and reasonable" and not unreasonably discriminatory.[1391] Indeed, the D.C. Circuit recently upheld the Commission's authority under section

[1382] *See* NARUC *USF/ICC Transformation NPRM* Comments at 10-11; New York Commission *USF/ICC Transformation NPRM* Comments at 10-11.

[1383] *2008 Order and ICC/USF FNPRM*, 24 FCC Rcd at 6481, para. 12.

[1384] *Id.* at 6480, para. 11.

[1385] *Id.*

[1386] 47 U.S.C. § 201(b).

[1387] *AT&T v. Iowa Utilities Bd.*, 525 U.S. at 378.

[1388] 47 U.S.C. § 251(i).

[1389] *Core Commc'ns. Inc. v. FCC*, 592 F.3d 139, 143 (D.C. Cir. 2010) (*Core*).

[1390] Some commenters argue that the Commission may prescribe a rate for interstate services only if it undertakes the rate prescription process set forth in Section 205 of the Act. *See* 47 U.S.C. § 205. *See* EarthLink *August 3 PN* Comments at 28 (citing *AT&T Co. v. FCC*, 487 F.2d 865 (2d Cir. 1973) (*AT&T*)); *see also* Core *USF/ICC Transformation NPRM* Comments at 8-9; SureWest *USF/ICC Transformation NPRM* Comments at 14-22. We disagree. In *AT&T*, the Second Circuit held that the Commission may not require a carrier to seek permission to file a tariff effecting a rate increase, but instead must process such a tariff in accordance with the procedures set forth in sections 203 to 205 of the Act. Nothing in that decision calls into question our authority to adopt rules to define what constitutes a just and reasonable rate for purposes of section 201. *See, e.g., Cable & Wireless, PLC v. FCC*, 166 F.3d 1224 (D.C. Cir. 1999).

[1391] 47 U.S.C. § 201; *see also, e.g., NARUC v. FCC*, 746 F.2d 1492, 1498 (D.C. Cir. 1984).

201 to establish interim rates for ISP-bound traffic, which the Commission had found to also be subject to section 251(b)(5).[1392]

772. In any event, we conclude that we have authority, independent of our traditional interstate rate-setting authority in section 201, to establish bill-and-keep as the default compensation arrangement for all traffic subject to section 251(b)(5), including intrastate traffic. Although section 2(b) has traditionally preserved the states' authority to regulate intrastate communications, after the 1996 Act section 2(b) has "less practical effect" because "Congress, by extending the Communications Act into local competition, has removed a significant area from the States' exclusive control."[1393] Thus, "[w]ith regard to the matters addressed by the 1996 Act," Congress "unquestionably" "has taken the regulation of local telecommunications competition away from the States,"[1394] and, as the Supreme Court has held, "the administration of the new *federal* regime is to be guided by federal-agency regulations."[1395] Our rulemaking authority in section 201(b) "*explicitly* gives the FCC jurisdiction to make rules governing matters to which the 1996 Act applies"[1396] and thereby authorizes our adoption of rules to implement section 251(b)(5)'s directive that LECs have a "duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications."[1397]

773. We reject the argument of some commenters that sections 252(c) and 252(d)(2) limit our authority to adopt bill-and-keep.[1398] Section 252(c) provides that states conducting arbitration proceedings under section 252 shall "establish any rates for interconnection, services, or network elements according to" section 252(d).[1399] Section 252(d)(2), in turn, states in relevant part that "[f]or the purposes of compliance by an *incumbent local exchange carrier* with section 251(b)(5), a State commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable" unless they: (i) "provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls *that originate on the network facilities of the other carrier*;" and (ii) determine such costs through a "reasonable approximation of the additional costs of terminating such calls."[1400] Section 252(d)(2) also states that the pricing standard it sets forth "shall not be construed ... to preclude arrangements ... that waive mutual

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1392 *See Core*, 592 F.3d 139; *see also 2008 Order and USF/ICC FNPRM*, 24 FCC Rcd at 6481, paras. 11-12 (finding that the "Commission has authority under section 201(b) to adopt rules to fill [] gap[s]" in section 252). In the *2008 Order and ICC/USF FNPRM* the Commission observed that sections 201 and 251(i), when read together, "preserve the Commission's authority to address new issues that fall within its section 201 authority over interstate traffic, including compensation for the exchange of ISP-bound traffic." *2008 Order and ICC/USF FNPRM*, 24 FCC Rcd at 6484-85, para. 21

1393 *AT&T v. Iowa Utilities Board*, 525 U.S. at 381-82 n.8.

1394 *Id.* at 378-79 n.6.

1395 *Id.* (emphasis in original).

1396 *Id.* at 380.

1397 47 U.S.C. § 251(b)(5).

1398 *See* COMPTEL *USF/ICC Transformation NPRM* Comments at 33-34; NASUCA *USF/ICC Transformation NPRM* Comments at 94, 103-05; Rural Associations *USF/ICC Transformation NPRM* Comments at 22, 26; Pac-West *USF/ICC Transformation NPRM* Comments at 11; CenturyLink Oct. 21, 2011 *Ex Parte* Letter at 2.

1399 47 U.S.C. § 252(c)(2).

1400 47 U.S.C. § 252(d)(2)(A) (emphasis added).

recovery (such as bill-and-keep arrangements)."[1401] Although the Supreme Court made clear that the Commission may, through rulemaking, establish a "pricing methodology" under section 252(d) for states to apply in arbitration proceedings,[1402] the Eighth Circuit has held that "[s]etting specific [reciprocal compensation] prices goes beyond the FCC's authority to design a pricing methodology and intrudes on the states' right to set the actual rates pursuant to § 252(c)(2)."[1403] Commenters who cite section 252(d) as a limitation on the Commission's authority to adopt bill-and-keep argue that bill-and-keep intrudes on states' rate-setting authority by effectively setting a compensation rate of zero.[1404]

774. We disagree for two reasons. First, the pricing standard in section 252(d) simply does not apply to most of the traffic that is the focus of this Order – traffic exchanged between LECs and IXCs. Section 252(d) applies only to traffic exchanged with an ILEC, so CLEC-IXC traffic is categorically beyond its scope. Even with respect to traffic exchanged with an ILEC, section 252(d) applies only to arrangements between carriers where the traffic "originate[s] on the network facilities of the other carrier," i.e., the carrier sending the traffic for transport and termination. IXCs, however, typically do not originate (or terminate) calls on their own network facilities but instead transmit calls that originate and terminate on distant LECs. Accordingly, to the extent our bill-and-keep rules apply to LEC-IXC traffic, the rules do not implicate any question of the states' authority under section 252(c) or (d) or the Eighth Circuit's interpretation of those provisions.[1405]

775. Second, and in any event, bill-and-keep is consistent with section 252(d)'s pricing standard. Section 252(d)(2)(B) makes clear that "arrangements that waive mutual recovery (such as bill-and-keep arrangements)" are consistent with section 252(d)'s pricing standard.[1406] As explained in the *Local Competition First Report and Order*, this provision precludes any argument that "the Commission and states do not have the authority to mandate bill-and-keep arrangements" or that bill-and-keep is permissible only if it is voluntarily agreed to by the carriers involved.[1407] Bill-and-keep also ensures "recovery of each carrier of costs" associated with transport and termination.[1408] The Act does not specify from whom each carrier may (or must) recover those costs and, under the approach we adopt today, each carrier will "recover" its costs from its own end users or from explicit support mechanisms such as the

[1401] 47 U.S.C. § 252(d)(2)(B).

[1402] *AT&T v. Iowa Utilities Board*, 525 U.S. at 384.

[1403] *Iowa Utilities Board v. FCC*, 219 F.3d 744, 757 (8th Cir. 2000).

[1404] *See* NASUCA *USF/ICC Transformation NPRM* Reply at 120-23.

[1405] Opponents of bill-and-keep argue that the language in the bill-and-keep "savings clause" in section 252(d)(2)(B)(i) implies the requirement that traffic be roughly in balance for a bill-and-keep arrangement to be appropriate. *See* XO *USF/ICC Transformation NPRM* Comments at 24; EarthLink *USF/ICC Transformation NPRM* Reply at 9. We disagree. Although our rules currently require a rough balance of traffic flows before a state may impose bill-and-keep in an arbitration proceeding, 47 C.F.R. § 51.713, as explained below, we reject that restriction as a matter of policy. *See supra* paras. 755-759. For present purposes, it is sufficient to note that nothing in section 252(d)(2) requires that traffic be balanced before bill-and-keep may be imposed on carriers.

[1406] 47 U.S.C. § 252(d)(2)(B)(i).

[1407] *Local Competition First Report and Order*, 11 FCC Rcd at 16054, para. 1111 (explaining that section 252(d)(2) "would be superfluous if bill-and-keep arrangements were limited to negotiated agreements, because none of the standards in section 252(d) apply to voluntarily-negotiated agreements."); *see also* 47 U.S.C. § 252(a)(1).

[1408] Although bill-and-keep by definition "waive[s] mutual recovery" (47 U.S.C. § 252(d)(2)(B)(i)) in that carriers do not pay each other for transporting and terminating calls, a bill-and-keep framework provides for "reciprocal" recovery because each carrier exchanging traffic is entitled to recover their costs through the same mechanism, i.e., through the rates they charge their own customers.

federal universal service fund.[1409] Thus, bill-and-keep will not limit the amount of a carrier's cost recovery, but instead will alter the source of the cost recovery – network costs would be recovered from carriers' customers supplemented as necessary by explicit universal service support, rather than from other carriers.[1410]

776. Finally, even assuming section 252(d) applies, our adoption of bill-and-keep as a default compensation mechanism would not intrude on the states' role to set rates as interpreted by the Eighth Circuit. To the extent the traffic at issue is intrastate in nature and subject to section 252(d)'s pricing standard, states retain the authority to regulate the rates that the carriers will charge *their end users* to recover the costs of transport and termination to ensure that such rates are "just and reasonable."[1411] Moreover, states will retain important responsibilities in the implementation of a bill-and-keep framework. An inherent part of any rate setting process is not only the establishment of the rate level and rate structure, but the definition of the service or functionality to which the rate will apply.[1412] Under a bill-and-keep framework, the determination of points on a network at which a carrier must deliver terminating traffic to avail itself of bill-and-keep (sometimes known as the "edge") serves this function, and will be addressed by states through the arbitration process where parties cannot agree on a negotiated outcome.[1413] Depending upon how the "edge" is defined in particular circumstances, in conjunction with how the carriers physically interconnect their networks, payments still could change hands as reciprocal compensation even under a bill-and-keep regime where, for instance, an IXC pays a terminating LEC to transport traffic from the IXC to the edge of the LEC's network.[1414] Consistent with their existing role

[1409] The economic premise of a bill-and-keep regime differs from the calling party network pays (CPNP) philosophy of cost causation. Under CPNP thinking the party that initiated the call is receiving the most benefit from that call. Under the bill-and-keep methodology the economic premise is that both the calling and the called party benefit from the ability to exchange traffic, i.e., being interconnected. This is consistent with policy justifications for bill-and-keep described in the *Intercarrier Compensation NPRM* in which the Commission said "there may be no reason why *both* LECs should not recover the costs of providing these benefits directly from their end users. Bill-and-keep provides a mechanism whereby end users pay for the benefit of making *and* receiving calls." *Intercarrier Compensation NPRM*, 16 FCC Rcd at 9625, para. 37 (emphasis in original).

[1410] "Carriers would need to turn to their own customers (supplemented, in appropriate cases, by explicit universal service support) to recoup their network costs, rather than to other carriers and, ultimately, those carriers' customers." AT&T *USF/ICC Transformation NPRM* Reply at 23.

[1411] 47 U.S.C. § 252(d)(2)(A).

[1412] *See, e.g., Policy and Rules Concerning Rates for Dominant Carriers*, CC Docket No. 87–313, Report and Order and Second Further Notice of Proposed Rulemaking, 4 FCC Rcd 2873, 3051-56, paras. 359-68 (1989) (discussing the need for, and definition of, baskets and bands of services for purposes of price cap regulation of AT&T); *Amendment of Sections 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry); and Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Thereof Communications Protocols under Section 64.702 of the Commission's Rules and Regulations*, CC Docket No. 85–229, Report and Order, 104 FCC 2d 958, paras. 214-17, 220-22 (1986) (requiring the identification and tariffing of certain Basic Service Elements underlying enhanced services). *See also, e.g.*, 47 C.F.R. § 61.2(a) ("In order to remove all doubt as to their proper application, all tariff publications must contain clear and explicit explanatory statements regarding the rates and regulations."); 47 C.F.R. § 61.54(j) ("The general rules (including definitions), regulations, exceptions, and conditions which govern the tariff must be stated clearly and definitely.").

[1413] In the FNPRM we seek comment on relying on that approach to defining the "edge" for purposes of bill-and-keep more generally, or whether additional Commission guidance or rules would be appropriate. *See infra* Section XVII.N.

[1414] This statement does not suggest any particular outcome with respect to the definition of the "edge," which is an issue we seek comment on below. *See infra* Section XVII.N.

under sections 251 and 252, which we do not expand or contract, states will continue to have the responsibility to address these issues in state arbitration proceedings, which we believe is sufficient to satisfy any statutory role that the states have under section 252(d) to "determin[e] the concrete result in particular circumstances" of the bill-and-keep framework we adopt today.[1415]

777. *Originating Access*. Some parties contend that the Commission lacks authority over originating access charges under section 251(b)(5) because that section refers only to transport and termination.[1416] Other commenters urge the Commission to act swiftly to eliminate originating access charges.[1417] Although we conclude that the originating access regime should be reformed, at this time we establish a transition to bill-and-keep only with respect to terminating access charge rates. The concerns we have with respect to network inefficiencies, arbitrage, and costly litigation are less pressing with respect to originating access, primarily because many carriers now have wholesale partners or have integrated local and long distance operations.

778. As discussed above, section 251(g) provides for the continued enforcement of certain pre-1996 Act obligations pertaining to "exchange access" until "such restrictions and obligations are explicitly superseded by regulations prescribed by the Commission."[1418] Exchange access is defined to mean "the offering of access to telephone exchange services or facilities for the purpose of the *origination* or termination of telephone toll services."[1419] Thus, section 251(g) continues to preserve originating access until the Commission adopts rules to transition away from that system. At this time, we adopt transition rules only with respect to terminating access and seek comment in the FNPRM on the ultimate transition away from such charges as part of the transition of all access charge rates to bill-and-keep.[1420] In the meantime, we will cap interstate originating access rates at their current level, pending resolution of the issues raised in our FNPRM.[1421]

779. *Section 332 and Wireless Traffic.* With respect to wireless traffic exchanged with a LEC, we have independent authority under section 332 of the Act to establish a default bill-and-keep methodology that will apply in the absence of an interconnection agreement. Although we have not previously exercised our authority under section 332 to reform intercarrier compensation charges paid by or to wireless providers, we have clear authority to do so, and this authority extends to both interstate and intrastate traffic.[1422] The Eighth Circuit has construed the Act to authorize the Commission to set reciprocal compensation rates for CMRS providers.[1423] In reaching that decision, the court relied on:

[1415] *AT&T v. Iowa Utilities Board*, 525 U.S. at 384.

[1416] *Compare* CBeyond et al. *USF/ICC Transformation NPRM* Comments at 10-11 *with* Global Crossing *USF/ICC Transformation NPRM* Comments at 12-13.

[1417] *See* iBasis *August 3 PN* Comments at 1-2.

[1418] 47 U.S.C. § 251(g).

[1419] 47 U.S.C. § 153(16) (emphasis added).

[1420] *See supra* Section XVII.M.

[1421] *See infra* Section XII.C.

[1422] We note that the Commission relied on its section 332 authority to adopt rules prohibiting LECs from imposing compensation obligations on CMRS carriers for non-access traffic pursuant to tariff. *See Developing a Unified Intercarrier Compensation Regime; T-Mobile et al. Petition for Declaratory Ruling Regarding Incumbent LEC Wireless Termination Tariffs*, Declaratory Ruling and Report and Order, 20 FCC Rcd 4855, 4863-64, para. 14 (2005) (*T-Mobile Order*); *see also infra* Sections XII.C.5 and XV.

[1423] *Iowa Utils. Bd. v. FCC,* 120 F.3d 753, 800 n.21 (8th Cir. 1997), *vacated and remanded in part in other grounds sub nom. AT&T v. Iowa Utils. Bd.,* 525 U.S. 366 (1999).